

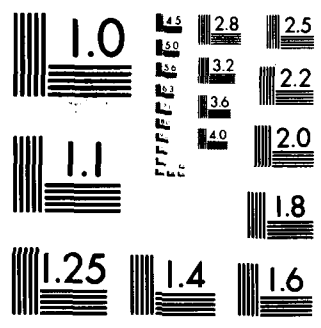
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LIFE PATH ANALYSIS AND PERFORMANCE:
FACTORS RELATING TO SUCCESS AMONG MINORITY
ENLISTED PERSONNEL IN THE NAVY

Johnnie Daniel, Ph.D.

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Richard A. Gibboney Associates
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FINAL REPORT

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Life Path Questionnaire (LPQ) Family Relationships (FAM) (cont'd. Premilitary Experiences Personal Competence (COMP) on back) Adaptability (ADAPT) Vocational Maturity (VMAT) Relationship with Authority Figures (AUTH) Rating Index Early Maturity (EMAT) Index of Tour-Competition Potential		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		
The Life Path Questionnaire (LPQ) was developed and refined as a non-traditional predictor of success and retention in the Navy. It is predicted on the assumption that premilitary experiences are related to attrition and military performance. This assumption has been demonstrated by previous researchers and the current author in previous research.		
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Index of Overall Evaluation
LPQ Score
Racial Differences

20. Abstract (cont'd.)

The LPQ yields scores for six major scales: Adaptability, Relationship with Authority Figures, Early Maturity, Family Relationships, Personal Competence, and Vocational Maturity. In the previous research a significant relationship was found between the LPQ scales and measures of both success and retention in the Navy. This previous research, however, suggested that there might be differences between the responses of blacks and whites on the LPQ scales which might effect the predictive value of the instrument. However, the small number of cases in the previous study precluded any detailed analysis of race differences. The current research was directed at determining if blacks and whites differ significantly in their responses on the LPQ. If differences do occur, are these differences in premilitary experience significant factors in predicting success and retention in the Navy.

The findings presented in this study are based upon data from 812 black, 800 white, and 68 "other" racial group members. All data were gathered at the three Navy recruit training centers at San Diego, CA; Great Lakes, IL; and Orlando, FL.

The results indicated that there were differences in response patterns to the LPQ. However, the data suggests that the predictive utility of the LPQ does not suffer significantly if scales derived from the total sample are used. The predictive utility of the scales would suffer if those scales derived from one racial category were used to try and predict performance and attrition for the other racial category (blacks vs. whites).

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INTRODUCTION

In response to mounting attrition rates and the increasing need for quality performance by those who do not attrite, the Navy has had increased concern with the identification of new factors which could be useful in predicting and explaining attrition and quality performance (Plag, 1969; Plag & Goffman, 1966; and Hand, Griffith, & Mobley, 1977). The Life Path Questionnaire (LPQ) is one of the instruments which has been developed toward this end (Gaymon & West, 1977; and Gaymon, 1977) to obtain information concerning an enlistee's premilitary institutional experiences. Scales derived from the LPQ have been found to be significant predictors of attrition and quality performance in the Navy (Gaymon & West, 1977; Daniel, 1980). However, there are questions left unanswered. One such question is the extent to which there are differences between blacks and whites in the relationship between premilitary and military experiences.

The purpose of this report was to followup the previous LPQ research and analyze, in detail, patterns of differences between black and white Navy recruits regarding potential for success in the Navy as measured by their interaction with institutions of socialization prior to joining the Navy.

Previous Research

One of the clearest messages offered by past research is that enlistment, performance, reenlistment, and attrition processes in the military are multivariate in nature (Hand et al., 1977). We have learned that models used in the prediction and explanation of attrition and military performance, as well as those pertaining to policy and program development, should likewise be multivariate in nature. These models should include both traditional and non-traditional factors.

Traditional and nontraditional factors have been found to be related to the decisions to enlist. It is not believed that the decision to enlist is not simply a personal decision, but a social decision made in consideration of employment, educational, and travel opportunities (Glickman, Goodstadt, Korman, & Romanczak, 1973). The enlistee brings with her/him a behavioral and attitudinal history, and a set of interests and needs which are matched with military responsibilities and duties.

In predicting how well a person will adjust to the Navy, traditional factors such as age, race, education, AFQT, and dependency status have been used. These variables and their composite score, the SCREEN score, have been found to be very useful in the enlistment selection process (Hand et al., 1977).

Nontraditional measures have also been found to be related to how well enlistees perform the tasks assigned to them (Drucker & Schwartz, 1973; Plag, 1969, Plag & Goffman, 1966; Plag, Wilkins, & Phelan, 1968; Plag, Goffman, & Phelan, 1970; and Sands, 1976). Some of these measures include the number of suspensions from school, dating frequency, parents' marital status, and performance on the California Psychological Inventory. This suggests that we should go beyond the basic socioeconomic characteristics of an enlistee; and that an enlistee's school experiences, peer-group experiences, and family experiences provide a basis for further understanding her/his later military experiences.

Why do enlistees attrite and fail to complete their tour of duty? Research on Navy recruits conducted by the Center for Management and Organizational Research of the University of South Carolina found that attrition during recruit training is explained, in part, by the expectations recruits bring with them (Mobley, Hand, & Logan, 1977; Mobley, Hand, Logan, & Baker, 1977; Mobley, Griffith, Hand, & Meglino, 1977). Failure in realizing one's expectations has also been found to be a cause of attrition among Navy enlistees who completed recruit training (Greenberg, Murphy, & McConeghy, 1977).

Once an enlistee completes her/his first tour of duty, how can one predict and understand the decision to reenlist? Research on reenlistment intentions has revealed that civilian work expectations and military career satisfaction are significant predictors in planning to reenlist (Schneider, 1973; Katz & Schneider, 1972; Glickman et al., 1973; Bachman, 1974; Carlisle, 1975; Stoloff, Lockman, Allbritton, & McKinley, 1972; and Bowers, 1973). Studies also suggest that personality factors are useful in predicting intention to reenlist (Frey, Goodstadt, Korman, Romanczak, & Glickman, 1974; Booth & Hoiberg, 1973; and Carlisle, 1975).

Actual reenlistment has been found to be attributed to military career satisfaction, MOS, pay, and military performance (LaRocco, Gunderson, & Pugh, 1975; Haber & Stewart, 1975; Kleinman & Shughart, 1974; Lindsay & Causey,

1969; Massell, 1976; McCall & Wallace, 1969; Nelson, 1970; and Quigley & Wilburn, 1969). Most studies did not include premilitary experiences when studying actual reenlistment; however, it was noted that LaRocco et al. (1975) found the number of times expelled from high school to explain six percent of the variance of actual reenlistment.

It has been demonstrated that premilitary experiences are related to attrition and military performance. Research by the U.S. Army led to their development of the Early Experience Questionnaire (EEQ) (Frank & Erwin, 1978; Bell, Kristiansen, & Seeley, 1974; Seeley, Rosen, & Stroad, 1978; and Seeley & Fishl, 1975). Findings of the analysis of the relationship between the EEQ and attrition within 180 days "strongly suggested that it would be feasible to use autobiographical questionnaire data to assist in identifying potential enlistees with a high probability to adapt to Army life" (Frank & Erwin, 1978, p. 30). The Life Path research continued the effort to identify premilitary/nontraditional predictors of success in the military.

The LPQ yields scores for six major scales: Adaptability (ADAPT), Relationship with Authority Figures (AUTH), Early Maturity (EMAT), Family Relationships (FAM), Personal Competence (COMP), and Vocational Maturity (VMAT); and a composite score representing all the scales, referred to as the LPQ score. Previous research has uncovered differences between blacks and whites in their mean values on these scales, their mean values of measures of success in recruit training, and in the relationships between the LPQ scales and the success measures (Gaymon, 1977).

The small number of cases in this study precluded detailed analyses. Some questions which were left unanswered included: Do blacks and whites differ in the set of factors which are useful in predicting success in the Navy? Do blacks and whites differ in the amount of variance in success in the Navy as attributed to premilitary experiences? The present study attempted to provide answers to these questions.

APPROACH

The research design of the present study had three major components: (1) a sampling of black and white recruits at the three recruit training centers; (2) the administration of the LPQ to the sampled recruits, and the evaluation of the recruits by their company commanders; and (3) analysis and interpretation of the data collected.

The Sample Design

Given that the present study was concerned with patterns of racial differences, a principal concern of the sample design was the selection of a sufficient number of both blacks and whites for detailed analyses. To ensure a sufficient number of black respondents, all black recruits at the time of the survey were selected to be included in the sample. For each black recruit selected, a white recruit was selected. The company commanders were instructed to select the first white person whose name followed the name of a black person on his duty roster. If the name of a black person followed that of another black person, the names of the following two white persons were selected.

The Data Collection Design

The LPQ was administered to the recruits in groups according to their companies. Appropriate privacy information was provided and explained. The voluntariness of their participation was emphasized, and it was also stressed that the information collected would be used for research purposes only, would not be viewed by their company commanders, and would in no way affect their career in the Navy.

The company commanders evaluated each recruit using a supervisor's rating form which was prepared for this study. This rating form consisted of 13 items and could be completed very easily (see Figure 1).

The Analysis Design

The procedures used in analyzing the data collected in this study were similar to those utilized in previous LPQ research (Daniel, 1980; and Gaymon & West, 1977). First, measures of performance in recruit training were developed based on the data collected with the supervisor's rating form. Four detailed indices were developed: (1) Index of Professional Performance, (2) Index of Military Behavior, (3) Index of Military Appearance, and (4) Index of Adaptability.

Figure 1: Supervisory Rating Form

Enlistee's Name _____
 Social Security Number _____ Date Completed _____
 Duty Station _____ Activity _____
 Name and Title of
 Supervisor Completing Form _____

Please evaluate the above named enlistee according to the items listed below by checking the appropriate box on the right.

	Never	Rarely	Sometimes	Often	Always	Not Observed	
1. Demonstrates good problem solving skills.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	} Index of Overall Evaluation
2. Resists authority.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Completes assignments on time.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Needs prodding to perform.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Works well with others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
6. Fails to meet standards of dress and appearance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Does more than is required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
8. Has been given non-judicial punishment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
9. Is poised and self-assured.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
10. Receives respect from co-workers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	Poor	Marginal	Average	Good	Out-standing		
11. In comparison to all the recruits you have supervised, how would you rate this recruit's performance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	} Rating Index	
12. How would you rate this recruit in terms of his/her chances to successfully complete his/her first tour?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
13. How long has this recruit been in training?	_____ weeks.					} Index of Tour Completion Potential	

The Index of Professional Performance is the unweighted mean of the following items on the Supervisor's Rating Form:

- Demonstrates good problem solving skills
- Needs prodding to perform
- Completes assignments on time
- Does more than is required.

The Index of Military Behavior is the unweighted mean of the following items on the form:

- Resists authority
- Has been given nonjudicial punishments.

The Index of Military Appearance is the unweighted mean of the following survey items:

- Fails to meet standards of dress and appearance
- Is poised and self-assured.

Finally, the following items were used in computing the Index of Adaptability:

- Works well with others
- Receives respect from co-workers.

The unweighted mean of the above indices was used as the Index of Overall Evaluation.

The company commanders were asked to evaluate the recruits in terms of the following items:

- In comparison to all the recruits you have supervised, how would you rate this recruit's performance? Poor, marginal, average, good, or outstanding.
- How would you rate this recruit in terms of his/her chances to successfully complete his/her first tour? Poor, marginal, average, good, or outstanding.

The answers to these questions were used as the Rating Index and the Index of Tour-Completion Potential, respectively.

LPQ scales and subscales were computed using procedures similar to those used in previous analyses (Daniel, 1980). Through a series of correlation and regression analyses we identified those scales and subscales which were significant in predicting the criterion measures when blacks and whites were considered together and when they were considered separately. Not all the criterion measures were utilized throughout the correlation and regression analyses. Primarily, we used the Index of Overall Evaluation.

The correlation and regression analyses proceeded in five stages. First, all the LPQ items were correlated with the Index of Overall Evaluation. This made it possible to examine the zero-order relationship between each item and the Index of Overall Evaluation. Next, regression models were created composed of the various subscales, and the Index of Overall Evaluation was regressed on these models. At this stage we were able to identify the items within the subscales which had significant effects on the Index of Overall Evaluation when other items in the subscale were controlled. Three sets of regression analyses were carried out: one considering blacks and whites together, one considering blacks separately, and one considering whites separately. Throughout the following stages separate analyses were similarly done for the total population, blacks, and whites.

The third stage of the analysis was designed to identify those subscales which had significant effects on the Index of Overall Evaluation, when other subscales within the same category were controlled. Once these subscales were identified, they were combined into the principal LPQ scales: FAM, EMAT, COMP, VMAT, ADAPT, and AUTH. The Index of Overall Evaluation was regressed on models composed of these scales. In the final stage, and LPQ scales were combined to form the LPQ score. The Index of Overall Evaluation was regressed on models composed of this variable (the LPQ score) as well as age and years of school completed. Throughout these analyses differences between blacks and whites were noted.

RESULTS AND CONCLUSIONS

The total number of participants in this study equaled 1680. (The distribution of respondents by recruit training center is displayed in Table 1.)

Table 1
Distribution of Respondents by Recruit Training Center

<u>Recruit Training Center</u>	<u>Number</u>	<u>Percent</u>
Great Lakes, Ill.	673	40.1
Orlando, Fla.	506	30.1
San Diego, Cal.	501	29.8
TOTAL	1680	100.0

Although the sample design was set up to include only blacks and whites, other racial/ethnic groups were included (see Table 2). However, our comparative

Table 2
Distribution of Respondents by Racial/Ethnic Group

<u>Racial/Ethnic Group</u>	<u>Number</u>	<u>Percent</u>
Black	812	48.3
White	800	47.6
Spanish American	18	1.1
Native American	6	.4
Asian	2	.1
Puerto Rican	8	.5
Other	19	1.1
Not Ascertained	15	.9
TOTAL	1680	100.0

analyses were made between blacks and nonblacks. The black sample consisted of 812 persons; the nonblack sample consisted of 853 persons, 800 of whom were white. We were not able to identify the racial/ethnic category of 15 recruits who failed to provide this information on the survey instruments.

SES Racial Comparisons

There were minor differences between the black and nonblack recruits in terms of age, sex, and years of school completed. Yet, the black recruits tended to be older, to have completed more years of school, and to be represented more by women, than the nonblack recruits (see Table 3).

Table 3
Age, Sex, and Years of School Completed
of Black and Nonblack Respondents

<u>Age, Sex, and Years of School Completed</u>	<u>Black</u>	<u>Nonblack</u>
<u>Age</u>		
Mean	20.0	19.4
Median	19.3	18.7
Standard Deviation	2.7	2.5
Number of Cases	794	862
<u>Sex</u>		
Percent Male	88.9	90.4
Percent Female	11.0	9.6
Number of Cases	799	865
<u>Years of School Completed</u>		
Mean	12.1	11.6
Median	12.0	11.8
Standard Deviation	1.2	1.2
Number of Cases	794	861

Performance in Recruit Training

The similarities between the black and nonblack recruits in their detailed evaluations by their company commanders were much more apparent than their differences (see Table 4). Blacks and nonblacks received essentially the same evaluation for the following items:

- Completes assignments on time
- Works well with others
- Fails to meet standards of dress and appearance
- Has been given nonjudicial punishment
- Is poised and self-assured
- Receives respect from co-workers.

The items for which greater differences tended to occur were:

- Demonstrates good problem solving skills
- Resists authority
- Needs prodding to perform
- Does more than is required.

These findings indicated that blacks did not have greater problems than whites in relating with their fellow recruits and in meeting assignment deadlines and dress codes. However, they did have more problems in relating to

Table 4

Detailed Evaluation of Recruits by Their Supervisors by Race

<u>Evaluation Items and Race</u>	<u>Never</u>	<u>Rarely</u>	<u>Sometimes</u>	<u>Often</u>	<u>Always</u>	<u>Total</u>	<u>Number</u>
Demonstrates good problem solving skills							
Black	2.5	13.2	36.1	36.6	11.6	100.0	645
Nonblack	2.1	10.5	36.6	35.0	15.7	100.0	702
Resists authority							
Black	47.2	30.6	15.9	5.9	0.4	100.0	716
Nonblack	49.2	34.0	14.0	2.5	0.4	100.0	774
Completes assignments on time							
Black	1.4	6.3	29.0	42.2	21.1	100.0	714
Nonblack	1.0	5.4	28.0	42.3	23.2	100.0	771
Needs prodding to perform							
Black	24.7	31.4	28.4	13.3	2.2	100.0	716
Nonblack	26.3	33.9	27.4	10.6	1.8	100.0	776
Works well with others							
Black	0.4	5.6	24.6	37.4	32.0	100.0	712
Nonblack	0.0	4.0	25.1	42.5	28.3	100.0	769
Fails to meet standards of dress and appearance							
Black	38.5	40.0	17.2	3.4	1.0	100.0	715
Nonblack	36.7	40.3	18.6	3.7	0.6	100.0	776
Does more than is required							
Black	7.5	21.8	32.7	26.9	11.1	100.0	710
Nonblack	3.7	21.0	33.2	31.6	10.5	100.0	765
Has been given nonjudicial punishment							
Black	92.6	4.3	2.4	0.7	0.0	100.0	713
Nonblack	93.3	4.4	1.0	0.5	0.0	100.0	771
Is poised and self-assured							
Black	1.6	9.3	34.6	36.8	17.7	100.0	690
Nonblack	2.2	10.8	34.3	35.7	17.0	100.0	740
Receives respect from co-workers							
Black	2.8	10.3	33.9	32.9	20.1	100.0	690
Nonblack	2.6	10.5	33.6	36.8	16.6	100.0	745

their superiors. It should be made clear that the data indicated that the vast majority of both blacks and nonblacks performed satisfactorily or better in recruit training. However, over six percent of the black recruits were evaluated as "often" or "always" resisting authority, yet less than three percent of the nonblack recruits were so evaluated. Fifteen percent of the black recruits were evaluated as "often" or "always" needing prodding to perform; eleven percent of the nonblack recruits were so evaluated. Twenty-nine percent of the black recruits were evaluated as "never" or "rarely" doing more than required; less than twenty-five percent of the nonblack recruits were so evaluated. These differences were not very substantial and were not statistically significant; they reflected slight trends, and did not submerge the overall similarities in the evaluations of blacks and nonblacks.

The overall evaluations the company commanders made of the recruits reflected the results of the detailed evaluations (see Table 5). The distribution of the evaluations of the blacks was similar to the distribution of the nonblacks' evaluations. However, overall the black recruits were evaluated somewhat lower than the nonblack recruits. Almost seventeen percent of the black recruits were evaluated as being "marginal" or "poor" when compared to all recruits; however, almost fifteen percent of the nonblack recruits were considered "marginal" or "poor". Almost seventeen percent of the black recruits were considered to have a "marginal" or "poor" chance of completing their first tour of duty; however, only a little more than twelve percent of the nonblack respondents were so evaluated.

The evaluative items were combined into the various indices of effective performance for the present study:

- Index of Professional Performance
- Index of Military Behavior
- Index of Adaptability
- Index of Military Appearance
- Index of Overall Evaluation.

(A distribution of the means and standard deviations of these indices are presented in Table 6.) These summary measures reflected the consistency between the black and nonblack recruits found in the examination of the percentage distributions in Tables 4 and 5.

Table 5
Comparative Ratings with Other Recruits and
Tour-Completion Potential of Respondents by Race

Comparative Rating and Tour-Completion Potential and Race	Poor	Marginal	Average	Good	Outstanding	Total	Number
In comparison to all the recruits you have supervised, how would you rate this recruit's performance?							
Black	4.1	14.6	42.3	28.6	10.4	100.0	629
Nonblack	1.3	13.4	39.9	34.2	11.2	100.0	672
How would you rate this recruit in terms of his/her chances to successfully complete his/her first tour?							
Black	5.5	11.3	34.8	35.3	13.1	100.0	620
Nonblack	3.2	9.0	35.3	37.9	14.6	100.0	663

Table 6

Indices of Professional Performance, Military Behavior, Adaptability, Military Appearance, and Overall Evaluation by Race

<u>Indices</u>	<u>Mean</u>		<u>Standard Deviation</u>		<u>Number</u>	
	<u>Black</u>	<u>Nonblack</u>	<u>Black</u>	<u>Nonblack</u>	<u>Black</u>	<u>Nonblack</u>
Index of Professional Performance	3.5	3.6	.881	.835	566	602
Index of Military Behavior	4.5	4.6	.563	.495	619	658
Index of Adaptability	3.8	3.8	.908	.810	614	651
Index of Military Appearance	3.9	3.9	.786	.788	611	648
Index of Overall Evaluation	3.8	3.9	.724	.700	548	576

Our analyses of the evaluation of the black and nonblack recruits indicated that the differences between blacks and nonblacks were not substantial. Where differences did occur, they indicated that the performance of the nonblack recruits was slightly better than the performance of the black recruits. The balance of this report dealt with the question of whether there was a similar lack of substantial differences between blacks and nonblacks in the relationships between the LPQ items and these evaluations.

The Correlation and Regression Analyses

Through the series of correlation and regression analyses outlined above, we were able to identify the LPQ items which had the highest predictive utility for blacks, and those which had the highest predictive utility for nonblacks. Separate sets of LPQ scales were developed for blacks and nonblacks utilizing those items which were found to be statistically significant. Items which were controlled were dropped from the analysis. For the regression analyses, only those respondents who had been in the Navy for at least two weeks were included. This control was made because the evaluations of those recruits who had been in the Navy for less than two weeks were based on a very limited time for interaction between the recruits and the company commanders. Some of the respondents had been in the Navy for only a few days. Therefore, the evaluations made of them would have been highly unreliable.

The Index of Overall Evaluation was the principal criterion variable used in the present study. For both blacks and nonblacks, this overall measure was highly correlated with the other criterion measures developed in the study (see Table 7). The correlations for the two racial categories were very close to each other. For both categories, the Index of Overall Evaluation seemed to serve as a good general measure of the performance of the recruits.

Stage One: Correlation of the LPQ Items with the Criterion Measures. In the beginning of the analyses, the Index of Overall Evaluation was correlated with all the LPQ items. The purpose was to examine the zero-order relationship between the index and the items. (The results of the correlations are presented in Appendix A.) It was observed that only about one-fourth of the 123 LPQ items had a statistically significant zero-order correlation with the criterion variable. Focusing on patterns of racial differences, it was readily recognized that the analyses for the black recruits yielded fewer significant correlations (a total of 23 significant correlations) than the analyses for the nonblacks (a total of 35 significant correlations). Excluding the items related to authority relationships, the multiple correlation of subsets for the LPQ items with the criterion variable was higher for the nonblacks than for the blacks; and for each scale category, except authority relations, there were more items which had a significant relationship among nonblacks than was the case for blacks. Two of the LPQ items which had a significant relationship with the criterion variable for the nonblacks had an inverse relationship where a direct relationship was expected (V1, Setting Hour for Coming in at Night; and V5, Date for First Time). For the black respondents, this also occurred for the items V1, Setting Hour for Coming in at Night; and V73, Respect for Authority not Shown.

The zero-order relationships provided a clue pertaining to patterns of racial differences in the relationship between the LPQ items and the criterion variables. These correlations were not used to determine definite conclusions as to what these patterns were, for it was possible that some of the correlations were spurious and influenced by other variables which had not been controlled. In order to make firm conclusions, we employed a multivariate analysis. The analysis proceeded to the next stages using multiple regression as the principal analysis technique.

Stages Two and Three: Regression of the Criterion Variable on Models Composed of Subscale Items and Subscale Total Scores. Stage Two involved the regression of the Index of Overall Evaluation on models composed of subscale items.

Table 7
Intercorrelation of Indices of RTC Performance for
Black and Nonblack Recruits

Indices of RTC Performance	1	2	3	4	5	6
Black						
1) Index of Professional Performance						
2) Index of Military Behavior	.6214					
3) Index of Adaptability	.8471	.6400				
4) Index of Military Appearance	.8202	.5194	.7642			
5) Index of Overall Evaluation	.9662	.7250	.9244	.8934		
6) Rating Index	.8588	.5790	.7770	.7323	.8580	
7) Index of Tour-Completion Potential	.7485	.5803	.7098	.6474	.7720	.8217
Nonblack						
1) Index of Professional Performance						
2) Index of Military Behavior	.5414					
3) Index of Adaptability	.8382	.5374				
4) Index of Military Appearance	.8248	.5024	.7510			
5) Index of Overall Evaluation	.9667	.6488	.9066	.8950		
6) Rating Index	.8353	.5178	.7605	.7524	.8454	
7) Index of Tour-Completion Potential	.7267	.4972	.7180	.6598	.7595	.7876

The purpose of these regressions was to determine, for each subscale, which LPQ items had a statistically significant effect on the criterion variable once all the other items in the subscale were controlled. As for the regressions at this stage and all the following stages, separate analyses were made for the black recruits, the nonblack recruits, and the total sample. It was thought that patterns of racial differences would be discovered by examining the results for these three sets of regressions. (The results of the Stage Two regressions are presented in Appendix B.)

As previously noted in the examination of the zero-order correlation coefficients, it was noted here that items which were useful in predicting quality recruit training performance for the black recruits were not useful in predicting quality recruit training performance for the nonblack recruits, and vice versa. The Stage Two regressions yielded 27 items which had statistically significant effects on the criterion variable for the black respondents, and 39 items for the nonblack respondents. However, only 11 items had statistically significant effects for both blacks and nonblacks.

The purpose of the Stage Three analyses was to identify, for each LPQ scale, those items which had statistically significant effects on the criterion variable when items from related subscales were controlled. It was thought that some of the items found to be statistically significant at the Stage Two analyses would not be significant when items from related subscales were controlled. This was found to be the case. The number of statistically significant items for the black respondents was reduced from 27 items in the Stage Two analyses to 17 items for the Stage Three analyses. Similarly, the reduction for the nonblack respondents was from 39 items to 26 items. Only 6 items were found to be statistically significant for both the black respondents and the nonblack respondents when related subscale items were controlled. These 6 items were:

- V1, Setting Hour for Coming in at Night
- V7, Received My Driver's Permit
- V39, Confident of Ability to Succeed
- V42, Parents Separated/Divorced
- V92, Promised Advance after Boot Camp
- V109, Wrote Letters.

Noticeably, not one item on the Adaptability and Authority Relations scales had a statistically significant effect among both blacks and nonblacks.

These results suggested that life experiences had somewhat different effects on blacks and whites in terms of their adjustment to the Navy. (The results of the Stage Three regressions are presented in Appendix C.)

Using the results of the Stage Three analyses, separate sets of LPQ scales were created for the black respondents, the nonblack respondents, and the total sample. The items used for the LPQ scales for the black respondents were those items found to be statistically significant for the black respondents in the Stage Three analyses. The same procedure was followed for the nonblack respondents and the total sample. (A listing of these items is presented in Tables 8, 9, and 10 for the black recruits, nonblack recruits, and total sample, respectively. Intercorrelations of the scales and the items which make them up are presented in Appendix D.)

Stage Four: Regression of the Criterion Variable on Models Composed of the LPQ Scales. The next step in our analysis design involved the regression of the criterion variable on regression models composed of these scales. Questions which were answered in this state included:

- Were the scales derived from the black sample comparable in their prediction of performance among nonblacks and the total sample to the prediction of performance among blacks?
- Were the scales derived from the nonblack sample comparable in their prediction of performance among blacks and the total sample to the prediction of performance among nonblacks?
- Were the scales derived from the total sample comparable in their prediction of performance among blacks and nonblacks, when considered separately, to the prediction of the performance when they were combined into one group?
- For each sample of respondents, which LPQ scales had the strongest effect on performance in recruit training?

These questions were answered by examining the multiple correlation coefficients which were obtained from the analyses. Beginning with the black recruits, it was noted that there was essentially no difference between the multiple correlation coefficients of the scales derived from the black sample and the scales developed from the total sample (see Table 11). However, the scales derived from the nonblack sample explained less than half the amount of variance explained by the scales derived from the black sample. In predicting performance among the black recruits it did not make any difference

Table 8
Items Included in the Scales
Derived from the Black Recruit Sample*

Family Relationship Scale

- V16 Hostile arguments parents had
- V42 Parents separated/divorced
- V108 Visit relatives (-)

Early Maturity Scale Items

- V1 Setting hour for coming in at night (-)
- V4 Trip away from home
- V7 Received my driver's permit

Personal Competence Scale

- V109 Wrote letters
- V125 Read science fiction (-)

Vocational Maturity Scale

- V39 Confident of ability to succeed (-)
- V88 Felt Navy give me satisfaction
- V92 Promised advance after boot camp
- V98 Navy training necessary advanced school (-)
- V99 Confident Navy make me skilled person

Adaptability Scale

- V41 One who initiated group activities
- V84 Experience in team effort

Authority Figures

- V18 Put out of classes by teachers
- V60 Best not to trust police

*The minus sign in parentheses (-) indicates that the item has an effect on performance opposite to that expected.

Table 9
Items Included in the Scales
Derived from the Nonblack Recruit Sample*

Family Relationship Scale

- V19 Did something special with parents (-)
- V31 Friends parents disapproved of
- V42 Parents separated/divorced
- V47 Discussed personal matters with parents (-)
- V59 Parents valued my opinions (-)
- V107 Got mad at parents

Early Maturity Scale

- V1 Setting hour for coming in at night (-)
- V2 Planning courses during high school
- V5 Date for first time (-)
- V7 Received my driver's permit

Personal Competence Scale

- V38 Avoided difficult subjects
- V67 Very good swimmer (-)
- V80 School learning came easy to me
- V82 Lot of time reading (-)
- V109 Wrote letters (-)
- V117 Read novels

Vocational Maturity Scale

- V39 Confident of ability to succeed
- V85 Heard Navy schools are good
- V92 Promised advance after boot camp

Adaptability Scale

- V42 Extracurricular activities
- V96 No trouble fitting into crew
- V114 Participated in school politics

Authority Figures Scale

- V58 Trouble working under strict teachers
- V67 Difficult to relax with authority
- V68 Treated unfairly by school principals
- V118 Drag race

*The minus sign in parentheses (-) indicates that the item has an effect on performance opposite to that expected.

Table 10
Items Included in the Scales
Derived from the Total Recruit Sample*

Family Relationships Scale

- V19 Did something special with parents (-)
- V42 Parents separated/divorced
- V76 Stayed home only when nothing else to do
- V107 God mad at parents
- V108 Visit relatives (-)

Early Maturity Scale

- V1 Setting hour for coming in at night (-)
- V2 Planning courses during high school
- V4 Trip away from parents
- V7 Received my driver's permit

Personal Competence Scale

- V80 School learning came easy to me

Vocational Maturity Scale

- V85 Heard Navy schools are good
- V88 Felt Navy give me satisfaction
- V92 Promised advance after boot camp

Adaptability Scale

- V22 Extracurricular activities
- V48 More comfortable working alone
- V84 Experience in team effort

Authority Figures Scale

- V58 Trouble working under strict teachers
- V60 Best not to trust police
- V62 Most policemen abuse their authority
- V67 Difficulty to relax with authority
- V68 Treated unfairly by school principals
- V72 Respect for authority not shown (-)
- V83 School officials forced accept change (-)

*The minus sign in parentheses (-) indicates that the item has an effect on performance opposite to that expected.

Table 11

Stage Four Multiple Regression for the Black Sample:
Multiple Regression of Index of Overall
Evaluation on Models Composed of LPQ Scales Derived for the Total
Sample, Nonblack Recruit Sample, and Black Recruit Sample

LPQ Scales Derived from the Total Sample		Regression Coefficients	
		Unstandardized	Standardized
FAM4		.2117*	.1311*
EMAT4		.2352*	.1612*
COMP4		-.0428*	-.0551*
VMAT4		.1643*	.1456*
ADAPT4		.0219	.0195
AUTH4		.4587*	.2234*
Constant Term	-66.0254		
Multiple R	.3861		
Multiple R ²	.1491		
Adjusted Multiple R ²	.1355		
Number of Cases	383		
LPQ Scales Derived from Nonblack Recruit Sample			
FAM5		.1039*	.0608*
EMAT5		.1813*	.1272*
COMP5		-.2502*	-.1265*
VMAT5		.0742*	.0614*
ADAPT5		-.0513*	-.0484*
AUTH5		.3000*	.1628*
Constant Term	2.8481		
Multiple R	.2569		
Multiple R ²	.0660		
Adjusted Multiple R ²	.0510		
Number of Cases	380		
LPQ Scales Derived from Black Recruit Sample			
FAM6		.4109*	.1816*
EMAT6		.1176*	.0937*
COMP6		.0058	.0058
VMAT6		.3572*	.1913*
ADAPT6		.1021*	.1091*
AUTH6		.1980*	.1921*
Constant Term	-63.9434		
Multiple R	.3817		
Multiple R ²	.1457		
Adjusted Multiple R ²	.1333		
Number of Cases	421		

*p ≤ .05

whether scales derived from the total sample or the black sample were used; however, it did make a difference if scales derived from the nonblack sample were used, as one's ability to make accurate predictions would be reduced by more than half.

Similar patterns were found for the nonblack recruits (see Table 12). As expected, the highest multiple correlation coefficient for these respondents (.4134) occurred when scales specifically derived for them were used. The lowest correlation coefficient for these respondents (.2459) occurred when scales specifically derived from the black recruit sample were used. The scales derived from the total sample yielded a multiple correlation coefficient of .3598. One would lose explanatory power for the nonblacks by using scales derived from the total sample or from the black sample. This was especially true if one used scales derived from the black sample, for the amount of explained variance was reduced by almost two-thirds (.1717 compared to .0605).

When we considered blacks and nonblacks as one sample, we found that the scales derived from both samples when they were considered separately explained an equivalent amount of variance (see Table 13). It made no difference which set of scales was used; each yielded essentially the same amount of explained variance. The amount of explained variance when scales derived from the total sample were used was somewhat higher, as expected.

The purpose of this study was to determine if there were patterns of differences between black and nonblack respondents to the LPQ which might influence its predictive value. While differences were found, the overall results suggested that the predictive utility of the LPQ would not suffer if scales derived from the total sample were used, rather than scales derived from the individual racial categories, when predicting the performance of each of the categories. However, the predictive utility of the scales would suffer if those scales derived from one racial category were used to predict performance in the other racial category.

In examining the individual scales it was found that the LPQ scales did not show the same results for each of the samples studied. In examining the standardized regression coefficients, it was noted that the most important scales for the black recruits were Authority Figures, Vocational Maturity, and Family Relationships. The Personal Competence scale had an insignificant effect on the respondents' Index of Overall Evaluation score. For the nonblack

Table 12

Stage Four Multiple Regression for the Nonblack Sample:
Multiple Regression of Index of Overall
Evaluation on Models Composed of LPQ Scales Derived for the Total
Sample, Nonblack Recruit Sample, and Black Recruit Sample

LPQ Scales Derived from the Total Sample		Regression Coefficients	
		Unstandardized	Standardized
FAM4		.1113*	.0742*
EMAT4		.1927*	.1367*
COMP4		.0743*	.1118*
VMAT4		.1069*	.0958*
ADAPT4		.0930*	.0862*
AUTH4		.3403*	.1836*
Constant Term	-53.2172		
Multiple R	.3598		
Multiple R ²	.1295		
Adjusted Multiple R ²	.1171		
Number of Cases	428		
LPQ Scales Derived from Nonblack Recruit Sample			
FAM5		.2379*	.1457*
EMAT5		.2025*	.1382*
COMP5		.2578*	.1421*
VMAT5		.0946*	.0879*
ADAPT5		.1618*	.1434*
AUTH5		.1790*	.1190*
Constant Term	-74.3958		
Multiple R	.4134		
Multiple R ²	.1717		
Adjusted Multiple R ²	.1597		
Number of Cases	422		
LPQ Scales Derived from Black Recruit Sample			
FAM6		.1580*	.0901*
EMAT6		.2129*	.1677*
COMP6		.0396	.0448
VMAT6		.0124	.0074
ADAPT6		.0470*	.0546*
AUTH6		.0868*	.1043*
Constant Term	-10.5046		
Multiple R	.2459		
Multiple R ²	.0605		
Adjusted Multiple R ²	.0479		
Number of Cases	455		

*p ≤ .05

Table 13

Stage Four Multiple Regression for the Total Sample:
Multiple Regression of Index of Overall Evaluation
on Models Composed of LPQ Scales Derived for the Total Sample,
Nonblack Recruit Sample, and the Black Recruit Sample

LPQ Scales Derived from the Total Sample		Regression Coefficients	
		Unstandardized	Standardized
FAM4		.1505*	.0973*
EMAT4		.2016*	.1418*
COMP4		.0242	.0344
VMAT4		.1412*	.1262*
ADAPT4		.0545*	.0502*
AUTH4		.3947*	.2030*
Constant Term	-58.1165		
Multiple R	.3582		
Multiple R ²	.1283		
Adjusted Multiple R ²	.1218		
Number of Cases	816		
LPQ Scales Derived from Nonblack Recruit Sample			
FAM5		.1886*	.1133*
EMAT5		.1929*	.1342*
COMP5		.0110	.0059
VMAT5		.1136*	.1101*
ADAPT5		.0429	.0399
AUTH5		.2242*	.1374*
Constant Term	-38.8144		
Multiple R	.2920		
Multiple R ²	.0853		
Adjusted Multiple R ²	.0784		
Number of Cases	808		
LPQ Scales Derived from Black Recruit Sample			
FAM6		.2431*	.1255*
EMAT6		.1668*	.1334*
COMP6		.0299	.0329
VMAT6		.1743*	.1002*
ADAPT6		.0754*	.0848*
AUTH6		.1317*	.1439*
Constant Term	-33.7267		
Multiple R	.2908		
Multiple R ²	.0846		
Adjusted Multiple R ²	.0783		
Number of Cases	880		

*p ≤ .05

recruits, on the other hand, Personal Competence, Family Relationships, Adaptability, and Early Maturity clustered together to have a greater effect on the total score than the other two scales. These findings indicated that the relative importance of premilitary experiences on performance in the military was different for blacks than it was for nonblacks.

Stage 5: Regression of the Criterion Variable on Models Composed of LPQ Score and Traditional Predictors of Military Success. The LPQ scales were combined into a single LPQ Score for each of the sample categories in the study. In computing the scores, the LPQ scales were weighted using their standardized regression coefficients as a basis in determining the appropriate weight. (The formulas used in computing the scores are presented in Appendix E. Intercorrelations of the scales and the LPQ Score derived from them are presented in Appendix F.)

We determined that the LPQ scales had statistically significant effects on performance in recruit training, and could be useful predictors. We were next concerned with whether we could do a better job predicting performance in recruit training by using other predictors. We were able to collect data on two traditional predictors of success in the military -- age and years of school completed. The Index of Overall Evaluation was regressed on models composed of these two variables, and the LPQ Scores derived for the various sample categories. (The results of these regressions are presented in Table 14.)

The LPQ Score was a better predictor of performance in recruit training than either age or education, and this was true for the total sample, the non-black sample, and the black sample. Correlating the LPQ scales and LPQ Score with all the criterion variables developed in the present study, we consistently found statistically significant relationships (see Tables 15, 16, and 17). It was indicated that information concerning the premilitary behavioral experiences of recruits, added significantly to our ability to predict success in recruit training.

Table 14

Stage Four Multiple Regression for the Three Samples:
Multiple Regression of Index of Overall Evaluation on
LPQ Score, Age, and Years School Completed for
Total Sample, Nonblack Recruit Sample, and Black Recruit Sample

		Regression Coefficients	
		Unstandardized	Standardized
<u>a. Total Sample</u>			
LPQ4		.7715*	.3196*
Age		.2721*	.0719*
Years School Completed		.4075*	.1025*
Constant Term	-55.1921		
Multiple R	.3830		
Multiple R ²	.1467		
Adjusted Multiple R ²	.1435		
Number of Cases	805		
<u>b. Nonblack Recruit Sample</u>			
LPQ5		.8890*	.3736*
Age		.3308*	.1240*
Years School Completed		.2862*	.0534*
Constant Term	-69.8768		
Multiple R	.4384		
Multiple R ²	.1922		
Adjusted Multiple R ²	.1864		
Number of Cases	421		
<u>c. Black Recruit Sample</u>			
LPQ6		.9559*	.3352*
Age		.1448*	.0537*
Years School Completed		.5080*	.0845*
Constant Term	-51.5018		
Multiple R	.3891		
Multiple R ²	.1514		
Adjusted Multiple R ²	.1452		
Number of Cases	414		

*p ≤ .05

Table 15
Correlation of LPQ Scales and Total Score with
Indices of Military Success for Total Sample

<u>Indices of Military Success</u>	<u>LPQ Scales and Total Score</u>						
	<u>FAM4</u>	<u>EMAT4</u>	<u>COMP4</u>	<u>VMAT4</u>	<u>ADAPT4</u>	<u>AUTH4</u>	<u>LPQ4</u>
Index of Professional Performance	.1593*	.1704*	.0742*	.1544*	.0833*	.2489*	.2738
Index of Military Behavior	.1394*	.1368*	.0480	.1100*	.0532	.1984*	.2030*
Index of Adaptability	.1255*	.1655*	.0804*	.0952*	.0838*	.2195*	.2520*
Index of Military Appearance	.1172*	.1259*	.0719*	.0963*	.1066*	.2194*	.2409*
Index of Overall Evaluation	.1666*	.1785	.0781*	.1553*	.1075*	.2622*	.2952*
Rating Index	.1273*	.1642*	.0644*	.1341*	.0831*	.2245*	.2467*
Index of Tour-Completion Potential	.0973*	.1394*	.0322	.1233*	.0657*	.1651*	.1910*

*p ≤ .05

Table 16

Correlation of LPQ Scales and Total Score with
Indices of Military Success for Nonblack Recruits

<u>Indices of Military Success</u>	<u>LPQ Scales and Total Score</u>						
	<u>FAM5</u>	<u>EMAT5</u>	<u>COMP5</u>	<u>VMAT5</u>	<u>ADAPT5</u>	<u>AUTH5</u>	<u>LPQ5</u>
Index of Professional Performance	.2199*	.2029*	.2272*	.2028*	.1910*	.2380*	.4046*
Index of Military Behavior	.1752*	.1100*	.1397*	.1123*	.1105*	.1687*	.2495*
Index of Adaptability	.1659*	.1689*	.1507*	.1013*	.1638*	.1826*	.3006*
Index of Military Appearance	.1562*	.1487*	.1780*	.1700*	.2062*	.2035*	.3435*
Index of Overall Evaluation	.2239*	.2164*	.2192*	.1931*	.1910*	.2380*	.4046*
Rating Index	.1817*	.1427*	.2009*	.1492*	.2025*	.1750*	.3344*
Index of Tour-Completion Potential	.1428*	.0620*	.1441*	.1563*	.1759*	.0734*	.2504*

*p ≤ .05

Table 17
Correlation of LPQ Scales and Total Score with
Indices of Military Success for Black Recruits

Indices of Military Success	LPQ Scales and Total Score						
	<u>FAM6</u>	<u>EMAT6</u>	<u>COMP6</u>	<u>VMAT6</u>	<u>ADAPT6</u>	<u>AUTH6</u>	<u>LPQ6</u>
Index of Professional Performance	.1338*	.1365*	.0009	.1762*	.0954*	.2194*	.2648*
Index of Military Behavior	.0689*	.1829*	.0157	.0897*	.0949*	.1842*	.2484*
Index of Adaptability	.1464*	.1661*	-.0267	.1333*	.1015*	.2273*	.2588*
Index of Military Appearance	.1247*	.1146*	.0091	.1212*	.1089*	.1392*	.2121*
Index of Overall Evaluation	.1701*	.1493*	-.0022	.1893*	.1202*	.2300*	.2979*
Rating Index	.1173*	.1666*	-.0161	.1442*	.0858*	.2090*	.2277*
Index of Tour-Completion Potential	.1167*	.1695*	-.0199	.1097*	.0751*	.2025*	.2306*

*p ≤ .05

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APPENDICES

Appendix A: Correlation of LPQ Scale Items
with the Index of Overall Evaluation

Appendix B: Stage Two Multiple Regressions

Appendix C: Stage Three Multiple Regressions

APPENDIX A

Correlation of LPQ Scale Items with The Index of Overall Evaluation

- Table A.1: Correlation of LPQ Family Relationship Scale Items with the Index of Overall Evaluation for Black and Nonblack Recruits
- Table A.2: Correlation of LPQ Early Maturity Scale Items with the Index of Overall Evaluation for Black and Nonblack Recruits
- Table A.3: Correlation of LPQ Personal Competence Scale Items with the Index of Overall Evaluation for Black and Nonblack Recruits
- Table A.4: Correlation of LPQ Adaptability Scale Items with the Index of Overall Evaluation for Black and Nonblack Recruits
- Table A.5: Correlation of LPQ Vocational Maturity Scale Items with the Index of Overall Evaluation for Black and Nonblack Recruits
- Table A.6: Correlation of LPQ Authority Figures Scale with the Index of Overall Evaluation for Black and Nonblack Recruits

Table A.1

Correlation of LPQ Family Relationship Scale Items with
the Index of Overall Evaluation for Black and Nonblack Recruits

<u>LPQ Family Relationships Scale Items</u>		<u>Blacks</u>	<u>Nonblacks</u>
a. Family Structure			
V42	Parents separated/divorced	.0966*	.1138*
b. Time Home			
V15	Doing something with parents	.0441	.0045
V20	Evenings with my family	.0646	-.0085
V25	Ran away from home	-.0137	.0902*
V44	Stayed away from home	-.0159	.0549
V76	Stayed home only when nothing else to do	.0616	.0479
	Multiple R	.1170*	.1161*
c. Supportive Relationships			
V19	Did something special for parents	-.0373	-.0546
V47	Discussed personal matters with parents	-.0313	-.0536
V59	Parents valued my opinions	-.0526	.1196*
V73	Family close to one another	-.0338	.0172
V75	Parents included me in discussions	.0112	.0052
V108	Visited relatives	-.0690	-.0594
V113	Worked on projects with parents	-.0382	-.0311
	Multiple R	.0980*	.1933*
d. Strained Relationships			
V16	Hostile arguments parents had	.1007*	.0154
V65	Parents wanted me to go college, I didn't	.0635	.0209
V66	Difficulty communicating with parents	.0564	.0644
V107	Got mad at parents	.0753*	.1230*
V112	Hassled brothers and sisters	.0525	.0862*
	Multiple R	.1390*	.1517*
e. Family-Friends			
V30	Friends of parents close to	-.0613	.0248
V31	Friends parents disapproved of	.0316	.0715
V49	Participation in community via parents	-.0385	-.0343
	Multiple R	.0523	.0843*

* $p \leq .05$

Table A.2

Correlation of LPQ Early Maturity Scale Items with
the Index of Overall Evaluation for Black and Nonblack Recruits

<u>LPQ Early Maturity Scale Items</u>		<u>Blacks</u>	<u>Nonblacks</u>
a. Early Home Independence			
V1	Setting hour for coming in at night	-.0803*	-.1183*
V4	Trip away from parents	.0659	.0422
V5	Date for first time	.0094	-.0866*
V6	Set own time schedule	-.0328	.0049
V8	Home on my own	.0605	-.0327
V10	Stopped treating me like a child	.0229	-.0094
	Multiple R	.1239*	.1721*
b. Early Institutional Involvement			
V2	Planning courses during high school	.0560	.0818*
V3	Attended summer camp	.0421	-.0163
V11	Regular part-time jobs	-.0110	.0447
V12	Budgeting my own money	-.0103	-.0056
V13	Own checking account	.0234	.0578
V33	Offices nominated in jr. high school	-.0439	.0818*
	Multiple R	.0644	.1342*
c. Early Driving			
V7	Received my driver's permit	.1200*	.1461*
V14	Bought my first car	.0405	.0715*
	Multiple R	.1164*	.1540*

*p ≤ .05

Table A.3

Correlation of LPQ Personal Competence Scale Items with
the Index of Overall Evaluation for Black and Nonblack Recruits

<u>LPQ Personal Competence Scale Items</u>		<u>Blacks</u>	<u>Nonblacks</u>
a. Academic Orientation			
V38	Avoided difficult subjects	-.0344	.1193
V80	School learning came easy	.0151	.1521*
V109	Wrote letters	.0630	-.0513
	Multiple R	.0756*	.1869*
b. Reading			
V37	Time in the library	-.0151	.0258
V46	Good reader	-.0162	.0069
V51	Read when entered first grade	-.0057	.0317
V82	Lot of time reading	-.0076	.0297
V104	Went to libraries	-.0050	.0532
V110	Read newspapers	.0228	.0413
V117	Read novels	-.0223	.1335*
V120	Read nonfiction books	-.0020	.0187
V124	Read editorials	.0426	.0585
V125	Read science fiction	-.0627	.0494
	Multiple R	.0979*	.1715*
c. Culture			
V101	Attended classical concerts	-.0096	.0050
V103	Visited museums	-.0491	.0601
V111	Went to see plays	.0092	.0627
V116	Did gardening	-.0133	-.0152
	Multiple R	.0545	.0908*
d. Sports			
V69	Very good swimmer	-.0141	-.0516
V102	Participated in athletics	.0255	.0530
V105	Went boating	-.0191	-.0031
V123	Went swimming	-.0347	-.0318
	Multiple R	.0471	.0680

* $p \leq .05$

Table A.4

Correlations of LPQ Adaptability Scale Items with
the Index of Overall Evaluation for Black and Nonblack Recruits

<u>LPQ Adaptability Scale Items</u>		<u>Blacks</u>	<u>Nonblacks</u>
a. Group Activities			
V22	Extracurricular activities	.0268	.1565*
V24	School activities participated in	.0053	.0902*
V84	Experience in team effort	.0967*	.0684
V121	Did volunteer work	.0109	-.0151
	Multiple R	.1012*	.1707*
b. Parental Model			
V45	Parents encouraged different friends	.0194	.0392
V52	Parents friends other racial groups	.0404	.0085
V61	Parents encouraged racial friends	.0188	.0711*
	Multiple R	.0422	.0734*
c. Group Leadership			
V41	One who initiated group activities	.0926*	.0298
V43	Among first students to learn events	.0317	.0395
	Multiple R	.0910*	.0487
d. New Experiences			
V27	Watching T.V.	-.0214	.0522
V56	Interested in other countries' customs	.0202	.0629
V71	Confident with new situations	-.0325	.0320
V115	Make new friends	-.0374	.0008
V126	Traveled out of town	.0019	-.0127
	Multiple R	.0506	.0815*
e. Sociability			
V29	Other high school visited	.0178	.0293
V32	Friends of another racial group	.0171	.0222
V48	More comfortable working alone	.0473	.0703*
V57	Little contact, other racial group	.0630	-.0095
V96	No trouble fitting into crew	.0054	.0811
V114	Participated in school politics	.0063	.1379*
V119	Went to movies	.0229	-.0047
V122	Played musical instruments	.0117	.0004
	Multiple R	.0883*	.1671*

* $p \leq .05$

Table A.5

Correlation of LPQ Vocational Maturity Scale Items with
the Index of Overall Evaluation for Black and Nonblack Recruits

<u>LPQ Vocational Maturity Scale Items</u>		<u>Blacks</u>	<u>Nonblacks</u>
a. Career Preparation			
V26	Chores around the house	.0381	-.0110
V28	Number of hours on school work	.0006	-.0670
V54	Best grades in math and/or science	-.0118	.0473
V89	Educational requirements of profession	.0089	.0489
V90	Prior training in Navy area pursued	.0328	-.0589
V93	Had skill in which Navy interested	-.0064	-.0375
V94	Learned about Navy before joining	.0389	-.0102
	Multiple R	.0650	.1438*
b. Career Expectation			
V39	Confident of ability to succeed	-.0552	.1198*
V85	Heard Navy schools are good	.0486	.0686*
V86	Thought Navy atmosphere to use skills	.0473	.0609
V87	Recruiter interview, good-bad points	.0029	-.0244
V88	Felt Navy give me satisfaction	.1455*	.0558
V91	Definite Navy career objectives	.0293	.0097
V92	Promised advance after boot camp	-.0064	.1649*
V95	Navy learned skill help as civilian	.0605	.0624
V97	Navy prepare for duty assignments	.0267	.0374
V98	Navy training necessary advanced school	-.0065	.0679
V99	Confident Navy make me skilled person	.0928*	.0472
	Multiple R	.2020*	.2174*

* $p \leq .05$

Table A.6

Correlation of LPQ Authority Figures Scale Items with
the Index of Overall Evaluation for Black and Nonblack Recruits

<u>LPQ Authority Figures Scale Items</u>		<u>Blacks</u>	<u>Nonblacks</u>
a. Parents			
V40	Parents often hassled me	.0718*	.0757*
V55	Resented discipline from parents	.0097	.0476
	Multiple R	.0726*	.0818*
b. Teachers			
V17	Teachers positive influence	-.0359	.0375
V18	Put out of classes by teachers	.1561*	.0881*
V21	Expelled/suspended from high school	.1552*	.2125*
V23	Disputes with school officials	.1183*	.0210
V53	Little sensitivity by officials	.1098*	.0817*
V58	Trouble working under strict teachers	.0797*	.1255*
V63	Teachers gave grade earned	.0028	.0527
V64	High school principals fail other job	.1094*	.0278
V68	Treated unfairly by school principal	.0927*	.1688*
V72	Respect for authority not shown	-.0837*	-.0600
V77	Teachers treated me fairly	.0492	.0005
V79	Felt excluded from school activities	.0367	.0795*
V83	School officials forced accept change	.0078	-.0283
V106	Argued with teachers	.0880*	.1068*
	Multiple R	.2613*	.2530*
c. Police			
V34	Traffic violations	-.0439	-.0003
V60	Best not to trust police	.1720*	.1023*
V62	Most policemen abuse their authority	.1181*	.1206*
V70	Police use unreasonable force	.0982*	.1030*
V74	Police often hassled kids	.0385	.0992*
	Multiple R	.2019*	.1233*
d. General			
V35	Unsatisfactory relationship with boss	.0037	-.0027
V50	Resisted being bossed	.0929*	.0364
V67	Difficult to relax with authority	.1066*	.1325*
V78	Used marijuana least three occasions	.0293	.0586
V81	Most retail clerks not very nice	.0569	.0623
V118	Drag raced	.0269	.1046*
	Multiple R	.1586*	.1980*

*p ≤ .05

APPENDIX B

Stage Two Multiple Regressions

Table B.1: Stage Two Multiple Regression for the Black Respondents: Statistically Significant Items Resulting from the Stepwise Multiple Regression of the Index of Overall Evaluation on Models Composed of Subscale Items

Table B.2: Stage Two Multiple Regression for the Nonblack Respondents: Statistically Significant Items Resulting from the Stepwise Multiple Regression of the Index of Overall Evaluation on Models Composed of Subscale Items

Table B.3: Stage Two Multiple Regression for the Total Sample: Statistically Significant Items Resulting from the Stepwise Multiple Regression of the Index of Overall Evaluation on Models Composed of Subscale Items

Table B.1

Stage Two Multiple Regression for the Black Respondents:
Statistically Significant Items Resulting from the
Stepwise Multiple Regression of the Index of Overall Evaluation
on Models Composed of Subscale Items

1. Family Relationship Scale Items
 - a. Family Structure Model
 - V42 Parents separated/divorced.
 - b. Time Home Model
 - V44 Stayed away from home. (-)
 - V76 Stayed home only when nothing else to do.
 - c. Supportive Relationships Model
 - V108 Visited relatives. (-)
 - d. Strained Relationships Model
 - V16 Hostile arguments parents had.
 - e. Family-Friends Model ^a
2. Early Maturity Scale Items
 - a. Early Home Independence Model
 - V1 Setting hour for coming in at night. (-)
 - V4 Trip away from parents.
 - b. Early Institutional Involvement Model ^a
 - c. Early Driving Model
 - V7 Received my driver's permit.
3. Personal Competence Scale Items
 - a. Academic Orientations Model
 - V109 Wrote letters.
 - b. Reading Model
 - V124 Read editorials.
 - V125 Read science fiction. (-)
 - c. Culture Model ^a
 - d. Sports Model ^a
4. Vocational Maturity Scale Items
 - a. Career Preparation Model ^a
 - b. Career Expectation Model
 - V39 Confident of ability to succeed.
 - V88 Felt Navy give me satisfaction.
 - V92 Promised advance after boot camp.
 - V98 Navy training necessary advanced school.
 - V99 Confident Navy make me skilled person.

(Table B.1 Continued)

5. Adaptability Scale Items

a. Group Activities Model ^a

V84 Experience in team effort.

b. Parental Model

c. Group Leadership Model

V41 One who initiated group activities.

d. New Experiences Model ^a

e. Sociability Model ^a

6. Authority Figures Scale Items

a. Parents Model

V40 Parents often hassled me.

b. Teachers Model

V17 Teachers positive influence. (-)

V18 Put out of classes by teachers.

V58 Trouble working with strict teachers.

V64 High school principals fail other jobs.

V72 Respect for authority not shown. (-)

c. Police Model

V60 But not trust police.

d. General Authority Model

V50 Resisted being bossed.

V81 Most retail clerks not very nice.

^a None of the items within this model was found to have a statistically significant relationship with the criterion variable.

Table B.2

Stage Two Multiple Regression for the Nonblack Respondents:
Statistically Significant Items Resulting from the
Stepwise Multiple Regression of the Index of Overall Evaluation
on Models Composed of Subscale Items

1. Family Relationships Scale Items
 - a. Family Structure Model
V42 Parents separated/divorced.
 - b. Time Home Model
V44 Stayed away from home.
 - c. Supportive Relationships Model
V19 Did something special for parents.
V47 Discussed personal matters with parents.
V59 Parents valued my opinions.
 - d. Strained Relationships Model
V107 Got mad at parents.
 - e. Family-Friends Model
V31 Friends parents disapproved of.
2. Early Maturity Scale Items
 - a. V1 Setting hour for coming in at night. (-)
V5 Date for first time. (-)
V6 Set own time schedule.
 - b. Early Institutional Involvement Model
V2 Planning courses during high school.
V13 Own checking account.
 - c. Early Driving Model
V7 Received my driver's permit.
3. Personal Competence Scale Items
 - a. Academic Orientation Model
V38 Avoided difficult subjects.
V80 School learning came easy.
V109 Wrote letters.
 - b. Reading Model
V82 Lot of time reading.
V117 Read novels.
 - c. Culture Model
V111 Go see plays.
 - d. Sports Model ^a
V68 Very good swimmer.
V100 Participated in athletics.

(Table B.2 Continued)

4. Vocational Maturity Scale Items
 - a. Career Preparation Model
 - V54 Best grades in math and/or science.
 - V89 Educational requirements of profession.
 - b. Career Expectation Model
 - V39 Confident of ability to succeed.
 - V85 Heard Navy schools are good.
 - V92 Promised advance after boot camp.
5. Adaptability Scale Items
 - a. Group Activities Model
 - V22 Extracurricular activities.
 - b. Parental Model
 - V61 Parents encouraged racial friends.
 - c. Group Leadership Model
 - V41 One who initiated group activities.
 - d. New Experiences Model
 - V56 Interested in other countries' customs.
 - e. Sociability Model
 - V96 No trouble fitting into crew.
 - V114 Participated in school politics.
6. Authority Figures Scale Items
 - a. Parents
 - V40 Parents often hassled me.
 - b. Teachers Model
 - V18 Put out of classes by teachers.
 - V23 Disputes with school officials. (-)
 - V53 Little sensitivity by officials.
 - V58 Trouble working with strict teachers.
 - V68 Treated unfairly by school principal.
 - c. Police Model
 - V70 Police use unreasonable force.
 - d. General Authority Model
 - V67 Difficult to relax with authority.
 - V118 Drag race.

^a None of the items within this model were found to have a statistically significant relationship with the criterion variable.

Table B.3

Stage Two Multiple Regression for the Total Sample:
Statistically Significant Items Resulting from the
Stepwise Multiple Regression of the Index of Overall Evaluation
on Models Composed of Subscale Items

1. Family Relationship Scale Items
 - a. Family Structure Model
V42 Parents separated/divorced.
 - b. Time Home Model
V76 Stayed home only when nothing else to do.
 - c. Supportive Relationships Model
V19 Did something special for parents. (-)
V108 Visited relatives. (-)
 - d. Strained Relationships Model
V107 Get mad at parents.
 - e. Family-Friends Model
V30 Friends of parents close to.
2. Early Maturity Scale Items
 - a. Early Home Independence Model
V1 Setting hour for coming in at night. (-)
V4 Trip away from parents.
 - b. Early Institutional Involvement Model
V2 Planning courses during high school.
 - c. Early Driving Model
V7 Received my driver's permit.
3. Personal Competence Scale Items
 - a. Academic Orientation Model
V80 School learning came easy.
 - b. Reading Model
V117 Read novels.
 - c. Culture Model ^a
 - d. Sports Model ^a
4. Vocational Maturity Scale Items
 - a. Career Preparation Model ^a
 - b. Career Expectation Model
V85 Heard Navy schools are good.
V88 Felt Navy give me satisfaction.
V92 Promised advance after boot camp.

(Table B.3 Continued)

5. Adaptability Scale Items

a. Group Activities Model

V22 Extracurricular activities.

V84 Experience in team effort.

b. Parental Model ^a

c. Group Leadership Model

V41 One who initiated group activities.

d. New Experiences Model ^a

e. Sociability Model

V48 More comfortable working alone.

V96 No trouble fitting into crew.

6. Authority Figures Scale Items

a. Parents Model

V40 Parents often hassled me.

b. Teacher's Model

V53 Little sensitivity by officials.

V58 Trouble working with strict teachers.

V68 Treated unfairly by school principal.

V72 Respect for authority not shown.

V83 School officials forced accept change.

c. Police Model

V60 Best not trust police.

V62 Most policemen abuse their authority.

d. General Authority Model

V50 Resisted being bossed.

V67 Difficult to relax with authority.

V81 Most retail clerks not very nice.

^a None of the items within this model was found to have a statistically significant relationship with the criterion variable.

APPENDIX C

Stage Three Multiple Regressions

- Table C.1: Stage Three Multiple Regression for the Black Respondents:
Multiple Regression of Index of Overall Evaluation on Models
Composed of LPQ Scale Items
- Table C.2: Stage Three Multiple Regression for the Nonblack Respondents:
Multiple Regression of Index of Overall Evaluation on Models
Composed of LPQ Scale Items
- Table C.3: Stage Three Multiple Regression for the Total Sample: Multiple
Regression of Index of Overall Evaluation on Models Composed of
LPQ Scale Items

Table C.1

Stage Three Multiple Regression for the Black Respondents:
Multiple Regression of Index of Overall Evaluation on
Models Composed of LPQ Scale Items

<u>Family Relationship Scale Items</u>		<u>Regression Coefficients</u>	
		<u>Unstandardized</u>	<u>Standardized</u>
V16	Hostile arguments parents had	.0901*	.1148*
V42	Parents separated/divorced	.0701*	.1012*
V108	Visit relatives	-.0736*	-.0800*
Constant Term	29.9931		
Multiple R	.1713		
Multiple R ²	.0293		
Adjusted Multiple R ²	.0235		
Number of Cases	509		
<u>Early Maturity Scale Items</u>			
V1	Setting hour for coming in at night	-.0524*	-.0691*
V4	Trip away from home	.0597*	.0742*
V7	Received my driver's permit	.0788*	-.1171*
Constant Term	46.6086		
Multiple R	.1525		
Multiple R ²	.0232		
Adjusted Multiple R ²	.0177		
Number of Cases	532		
<u>Personal Competence Scale Items</u>			
V109	Wrote letters	.0663*	.0790*
V125	Read science fiction	-.0521*	-.0765*
Constant Term	37.2413		
Multiple R	.1011		
Multiple R ²	.0102		
Adjusted Multiple R ²	.0066		
Number of Cases	544		
<u>Vocational Maturity Scale Items</u>			
V39	Confident of ability to succeed	-.0581*	-.0705*
V88	Felt Navy give me satisfaction	.1009*	.1434*
V92	Promised advance after boot camp	.0603*	.0818*
V98	Navy training necessary advanced school	-.0561*	-.0666*
V99	Confident Navy make me skilled person	.0560*	.0739*
Constant Term	28.2782		
Multiple R	.1961		
Multiple R ²	.0384		
Adjusted Multiple R ²	.0295		
Number of Cases	540		

*p ≤ .05

(Table C.1 Continued)

Adaptability Scale Items

V41	One who initiated group activities	.0541*	.0745*
V84	Experience in team effort	.0616*	.0782*
Constant Term	26.7477		
Multiple R	.1204		
Multiple R ²	.0145		
Adjusted Multiple R ²	.0108		
Number of Cases	539		

Authority Figures Scale Items

V18	Put out of classes by teachers	.1285*	.1253*
V60	Best not to trust police	.1276*	.1794*
Constant Term	12.6084		
Multiple R	.2355		
Multiple R ²	.0555		
Adjusted Multiple R ²	.0513		
Number of Cases	455		

*p ≤ .05

Table C.2

Stage Three Multiple Regression for the Nonblack Respondents:
Multiple Regression of Index of Overall Evaluation on
Models Composed of LPQ Scale Items

Family Relationship Scale Items		Regression Coefficients	
		Unstandardized	Standardized
V19	Did something special with parents	-.0553*	-.0704*
V31	Friends parents disapproved of	.0322*	.0535*
V42	Parents separated/divorced	.0467*	.0674*
V47	Discussed personal matters with parents	-.0651*	-.1000*
V59	Parents valued my opinions	-.0880*	.1213*
V107	Got mad at parents	.0675*	.1026*
Constant Term		28.4688	
Multiple R		.2094	
Multiple R ²		.0438	
Adjusted Multiple R ²		.0315	
Number of Cases		473	
Early Maturity Scale Items			
V1	Setting hour for coming in at night	-.0672*	-.0982*
V2	Planning courses during high school	.0765*	.1134*
V5	Date for first time	-.0670*	-.0967*
V7	Received my driver's permit	.1166*	.1429*
Constant Term		56.4057	
Multiple R		.2248	
Multiple R ²		.0505	
Adjusted Multiple R ²		.0435	
Number of Cases		547	
Personal Competence Scale Items			
V38	Avoided difficult subjects	.0507*	.0787*
V67	Very good swimmer	-.0467*	-.0672*
V80	School learning came easy	.0890*	.1361*
V82	Lot of time reading	-.0746*	-.1108*
V109	Wrote letters	-.0389*	-.0612*
V117	Read novels	.1125*	.1675*
Constant Term		30.2804	
Multiple R		.2383	
Multiple R ²		.0568	
Adjusted Multiple R ²		.0467	
Number of Cases		569	

*p ≤ .05

(Table C.2 Continued)

<u>Vocational Maturity Scale Items</u>		<u>Regression Coefficients</u>	
		<u>Unstandardized</u>	<u>Standardized</u>
V39	Confident of ability to succeed	.0644*	.1010*
V85	Heard Navy schools are good	.0468*	.0632*
V92	Promised advance after boot camp	.1014*	.1530*
Constant Term	17.8389		
Multiple R	.2043		
Multiple R ²	.0417		
Adjusted Multiple R ²	.0366		
Number of Cases	569		
 <u>Adaptability Scale Items</u>			
V22	Extracurricular activities	.0877*	.1244*
V96	No trouble fitting into crew	.0480*	.0716*
V114	Participated in school politics	.0735*	.0960*
Constant Term	18.4194		
Multiple R	.1950		
Multiple R ²	.0380		
Adjusted Multiple R ²	.0329		
Number of Cases	566		
 <u>Authority Figures Scale Items</u>			
V58	Trouble working under strict teachers	.0603*	.0927*
V67	Difficult to relax with authority	.0654*	.0980*
V68	Treated unfairly by school principals	.0670*	.1003*
V118	Drag race	.0434*	.0705*
Constant Term	15.2488		
Multiple R	.2299		
Multiple R ²	.0528		
Adjusted Multiple R ²	.0442		
Number of Cases	442		

*p ≤ .05

Table C.3

Stage Three Multiple Regression for the Total Sample:
Multiple Regression of Index of Overall Evaluation on
Models Composed of LPQ Scale Items

<u>Family Relationship Scale Items</u>		<u>Regression Coefficients</u>	
		<u>Unstandardized</u>	<u>Standardized</u>
V19	Did something special with parents	-.0417*	-.0561*
V42	Parents separated/divorced	.0645*	.0927*
V76	Stayed home only when nothing else to do	.0331	.0476
V107	Got mad at parents	.0606*	.0870*
V108	Visit relatives	-.0559*	-.0814*
Constant Term	32.5624		
Multiple R	.1741		
Multiple R ²	.0303		
Adjusted Multiple R ²	.0251		
Number of Cases	940		
<u>Early Maturity Scale Items</u>			
V1	Setting hour for coming in at night	-.0710*	-.0984*
V2	Planning courses during high school	.0552*	.0792*
V4	Trip away from parents	.0364*	.0522*
V7	Received my driver's permit	.0931*	.1313*
Constant Term	46.0409		
Multiple R	.1877		
Multiple R ²	.0352		
Adjusted Multiple R ²	.0317		
Number of Cases	1100		
<u>Personal Competence Scale Items</u>			
V80	School learning came easy to me	.0558*	.0790*
Constant Term	33.1798		
Multiple R	.0790		
Multiple R ²	.0062		
Adjusted Multiple R ²	.0054		
Number of Cases	1121		
<u>Vocational Maturity Scale Items</u>			
V85	Heard Navy schools are good	.0334	.0469
V88	Felt Navy give me satisfaction	.0654*	.0914*
V92	Promised advance after boot camp	.0815*	.1168*
Constant Term	20.7477		
Multiple R	.1626		
Multiple R ²	.0264		
Adjusted Multiple R ²	.0238		
Number of Cases	1121		

*p ≤ .05

(Table C.3 Continued)

<u>Adaptability Scale Items</u>		<u>Regression Coefficients</u>	
		<u>Unstandardized</u>	<u>Standardized</u>
V22	Extracurricular activities	.0486*	.0690*
V48	More comfortable working alone	.0308	.0440
V84	Experience in team effort	.0374*	.0529*
Constant Term	27.0641		
Multiple R	.1083		
Multiple R ²	.0117		
Adjusted Multiple R ²	.0090		
Number of Cases	1110		
<u>Authority Figures Scale Items</u>			
V88	Trouble working under strict teachers	.0533*	.0763*
V60	Best not to trust police	.0517*	.0738*
V62	Most policemen abuse their authority	.0727*	.1037*
V67	Difficult to relax with authority	.0578*	.0810*
V68	Treated unfairly by school principals	.0592*	.0848*
V72	Respect for authority not shown	-.0404	-.0236
V83	School officials forced accept change	-.0702*	-.1001*
Constant Term	20.1121		
Multiple R	.2568		
Multiple R ²	.0660		
Adjusted Multiple R ²	.0581		
Number of Cases	844		

*p ≤ .05

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